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REMARKS

This response is intended to be fully responsive to the non-final office action ("office action") having a mailing date of July 25, 2006, wherein claims 1-2 and 13-23 were rejected. Claim 2 was objected to by the examiner. Claim 2 has been cancelled. Claim 23 has been amended to correct a typographical error. However, the scope of the claim is not changed by the correction.

For the reasons stated below, Applicant does not believe that the references discussed below do not teach or suggest all of the elements of the independent claims. Further, Applicant believes that many if not all of dependent claims recite separately patentable subject matter, and therefore Applicant reserves the right to address dependent claims not specifically addressed herein in subsequent papers.

Double Patenting

Claims 1-2 and 13-23 are rejected on the ground of non-statutory obviousness-type double patenting unpatentable over Claim 1 of U.S. Patent No. 6,795,402. Applicant disagrees with any suggestion that the claims might not be independently patentable over U.S. Patent No. 6,795,402. Nevertheless, to facilitate prosecution, a terminal disclaimer is enclosed.

Claim Rejections – 35 U.S.C. § 103

I. Rejection of claims 1-2, and 13-18

Claims 1-2 and 13-18 were rejected as being unpatentable over Keisling et al. (US Patent No. 5,664,105) in view of Walsh (US Patent No. 5,365,509). "To establish prima facie obviousness of a claimed invention, all the claim limitations must be taught or suggested by the prior art. *In re Royka*, 490 F.2d 981, 180 USPQ 580 (CCPA 1974)." M.P.E.P. § 2143.03. "Obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed

invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988); *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed Cir. 1992)." M.P.E.P. § 2143.01. Thus, a *prima facie* case of obviousness requires: (1) a suggestion or motivation to modify or combine the reference teachings; (2) a reasonable expectation of success; and (3) a teaching or suggestion in the prior art references of all of the claim limitations (MPEP 2143). For the following reasons, Applicant respectfully traverses the rejections.

A. Claim 1

It is respectfully submitted that claim 1 is patentable. As a preliminary matter, the Examiner agrees that Keisling does not include all of the recitations of claim 1, including the recitation of a digitizer for sampling analog signal to digital signal.

Nevertheless, the Examiner relies on Keisling for the alleged teaching that it "classifies the signal events as network communications, noise, interference and/or crosstalk." (Page 4). However, careful review of the portions of the references cited by the Examiner and the reference as a whole includes absolutely no mention of these features. For example, the words "interference" and "crosstalk" are used nowhere in either specification, let alone the recitation that the processor classifies the signal events.

More specifically, the Examiner refers to Figures 2 and 3 and Column 2, lines 38-45. The quoted portion of Keisling states as follows:

> In accordance with the present invention, a network analysis apparatus and method are provided wherein network bandwidth consumed by collisions is measured and displayed as well as the occurrence and bandwidth consumption of ghost frames. Frames are classified into four types: local collisions, remote collisions, ghosts or other and both byte count and the number of frames of each particular type are determined and displayed.

Keisling defines frames and ghost frames as follows:

> The Ethernet and IEEE 802.3 specifications require that all frames on the network begin with a specific pattern known as a preamble and Frame Start Delimiter. Frames not meeting this requirement, referred to herewithin as "ghost" frames, are assumed to be fragments of collisions which are normal and insignificant and are therefore ignored by normally operating stations in accordance with the Ethernet specification.

(Column 1, line 63 – Column 2, line 3). Thus, Keisling is directed to looking at specific frames of data packets.

Keisling is no more relevant than the prior art specifically addressed in the Background of the Invention of the present application:

> Protocol analyzers and remote monitoring (RMon) probes are commercially available devices that decode properly formatted digital transmissions on LANs, or similar networks. The devices function as passive network nodes that acquire packets and detect the cable voltages that are indicative of collisions. The origin, destination, and number of packets can be determined by reference to the packet's headers and bandwidth utilization statistics accumulated for analysis. The number and frequency of collisions can also be monitored.
>
> FIG. 1 illustrates the architecture for the network interface portion 1410 of a protocol analyzer or RMon probe, which incidently is similar to any other network interface chip for a node in a CSMA/CD-type network. The interface comprises a phase-locked loop 1420 that uses each packet's preamble to synchronize to the source node. A decoder 1430 then extracts the destination address DA, source address SA, and data from the packet and performs error checking in response to a cyclic redundancy check CRC data contained in the frame check sequence (FCS) to ensure the packet 1440 is valid. On the assumption that it is, the decoder 1430 sends out only the destination address DA, source address SA, and data on the output line 1450. Simultaneously, a d.c. voltage threshold detector 1460 monitors the average voltage on the input line. In the example of 10Base(2) and (5), it will indicate a collision if the magnitude of the input voltage is more negative than -1.6 Volts. This occurs because the simultaneous transmission from two or more sources are additive on the network cable. When a collision is detected, the threshold detector generates the signal on a collision sense line 1470 and also disables the decoder 1430.

Page 3, line 12 – Page 4, line 8. (Emphasis added). As further discussed in the Background, there are a number of problems with such a prior art approach. Additional issues are also discussed, for

example, at page 5, line 20 through Page 6, line 20. Moreover, as noted in the first sentence of the summary, prior art systems such as the one disclosed in Keisling operates on the assumption that the physical layer, hardware and media are operational. Page 5, lines 15-18.

In contrast to the prior art, the claimed invention is able to classify signal events, as opposed to frames of data, as digital communications, noise, interference and/or crosstalk. Thus, the claimed invention is patentably different then the teachings of Keisling.

The differences are magnified by the attempt by the Examiner to combine Keisling with Walsh. One of ordinary skill in the art would not have been motivated to combine the two references. Even if both references were directed to improve throughput of a network, and Applicant disagrees with this assertion, "[t]he mere fact that references can be combined or modified does not render the resultant combination obvious unless the prior art also suggests the desirability of the combination. *In re Mills*, 916 F.2d 680, 16 USPQ2d 1420 (Fed. Cir. 1990)." M.P.E.P. § 2143.01. Further, a reference must be considered for all it teaches, including disclosures that teach away from the invention as well as disclosures that point toward the invention. *Ashland Oil, Inc. v. Delta Resins & Refractories, Inc.* 776 F.2d 281, 227 U.S.P.Q. 657 (Fed. Cir. 1985).

The Examiner relies on Walsh for the alleged teaching of using a digitizer for sampling an analog signal to digital signal. In view of the teaching of Keisling to analyze frames of data, there is absolutely no suggestion within Keisling of using a digitizer as taught in Walsh. In fact, Keisling teaches specifically away from such a combination through its specific teaching of analyzing frames of data as contrasted to the recitations of claim 1, which uses a digitizer to digitally sample analog characteristics of digital communication events. A system processor then downloads data of the sampled signal events from the digitizer, which analyzes the analog characteristics, and which decodes the signal events, which are digital communications between the devices, based on the data, and then classifies the signal events as digital communications, noise, interference and/or crosstalk, in the manner set forth in claim 1.

The non-obvious nature of the claimed recitation and a number of the advantages over prior art such as Keisling is specifically discussed in the Summary of the present application as follows:

> In light of these problems, the present invention is directed to a network diagnostic device that samples the voltages on the cabling of the network by analog-to-digital digital (A/D) conversion, but preferably does so at a higher rate and with greater resolution then is required to minimally detect digital transitions on the cabling. This A/D sampling provides information on the analog characteristics of digital and noise signals on the network. As a result, the reasons why a particular packet may be illegal, either because of a subthreshold voltage transition or transient noise, for example, can be determined. Also, the nature of any network noise, crosstalk or interference can be identified and distinguished from legal and illegal transmissions. Further, node transmitters that cause improperly timed transmissions or fail to correctly detect or respond to collisions can be located. Defective cabling can also be identified. In short, the present invention provides the network manager or technician with a greater spectrum of information than would be available through typical digital decoding or TDR techniques. Even proactive maintenance is possible, allowing the network manager to predict rather than react to a failure mode.

Page 7, line 1 through line 15. As a result, it is respectfully submitted that claim 1 is patentable from the prior art of record.

B. Claims 13-18

Independent claim 13 is patentably distinguishable from the prior art of record. Among other things it recites the downloading of data arrays of signal events to a system processor, and analyzing the data arrays to identify the signal events. It also recites determining analog characteristics of the signal events, and decoding the signal events. No such teachings are shown in the prior art of record. Nor is any explanation given concerning the teachings of these claim limitations by the Examiner.

Moreover, once again, there is no suggestion to combine Keisling and Walsh. In fact, as discussed above with respect to claim 1, Keisling teaches away from such a combination to the

extent that the Examiner is relying on somehow combining the two references to address the recitations related to use of a digitizer to digitally sample analog characteristics of signal events.

The various dependent claims are also patentably dependent even though they are patentable by virtue of their dependence on independent claim 13. For example, with respect to claim 16, no combination has been shown that recites the identifying of sources of transmissions on a network by calculating parameters for transmissions from known sources, calculating the parameters for a transmission from an unknown source, and identifying the unknown source based upon the degree to which the parameters match parameters from the known sources. With respect to claim 17, the discussion with respect to claim 1 is applicable to the recitations directed to classifying the signal events as digital communications, noise, interference and/or crosstalk.

II. Rejection of claims 19-23

Claims 19-23 have been rejected under 35 USC § 103(a) as being unpatentable over the '105 patent, the '509 patent, and further in view of Bhatt et al. (US Patent No. 4,580,872).

With respect to claims 19-21, they depend from claim 13 or another dependent claim that is in turn dependent on claim 13. Thus, they are in condition for allowance. Moreover, the claims are also separably patentable.

Claim 22, for example, recites that the system processor determines whether the network communications are within the frequency and voltage specifications for the network. The Examiner states that it would have been obvious to one of ordinary skill in the art to recognize that a network analyzer device must have the frequency and voltage within the specifications of the network to work and analyze the problem for the network. However, no cited references are provided, let alone how the references may be combined to teach the claimed invention. If the Examiner is taking official notice, the Applicant respectfully requests pursuant to 37 CFR 1.104(d)(2) and MPEP § 2144.04 that the Examiner either provide a supporting affidavit, or actual references in support. As the Federal Circuit decision in In re Sang Su Lee, 2002 U.S. App. LEXIS 855 (Fed. Cir. January 18,

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2002) makes clear, each and every element of the Applicant's claims must be supported by a prior art citation in order to reject the Applicant's claims. Otherwise, a supporting reference is respectfully requested.

CONCLUSION

In view of the above amendment, Applicant believes the pending application is in condition for allowance.

Applicant believes no fee is due with this response. However, if a fee is due, please charge our Deposit Account No. 18-0013, under Order No. 65807-0065 from which the undersigned is authorized to draw.

Dated: 10/25/06

Respectfully submitted,

By _____

Michael B. Stewart
Registration No.: 36,018
RADER, FISHMAN & GRAUER PLLC
Correspondence Customer Number: 10291
Attorney for Applicant